

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017754**Date Inspected:** 01-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** John Pagliero**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joints 4E/5E LS-2, inside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) was performing Shielded Metal Arc Welding (SMAW). QC Inspector John Pagliero was monitoring the work.
- 2) At weld joints 4E/5E LS-4, 5 and 6, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was performing weld build up / buttering using the SMAW process. QC Inspector John Pagliero was monitoring the work.
- 3) Status of welding on 7E/8E welds joints A thru F, see below for details.

At weld joints 4E/5E LS-2, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) performing SMAW. This QA Inspector observed the face of the weld had been marked with "fill" at several locations indicating QC inspection personnel had performed a visual inspection and discovered several areas that required additional weld metal. This QA Inspector performed a verification of the following welding parameters: the preheat temperature was greater than 100 ° C but less than the maximum interpass temperature by use of temperature indicating markers and the welding amperage was 123 using a 3,2 mm

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

diameter E9018H4R electrode. This QA Inspector observed the preheat temperature was being maintained by using an electric induction heating blanket attached to the back side of where welding was being performed. This QA Inspector observed QC Inspector John Pagliero was present and monitoring the welding. This QA Inspector asked QC Inspector John Pagliero if the weld would receive post heating upon completion and was informed the heating blanket would remain on the weld to maintain the minimum preheat temperature for a minimum of 3 hours upon completion, unless instructed otherwise. The welding observed appeared to comply with ABF-WPS-D15-1012-3. This QA Inspector observed welding had been completed at the groove weld noted above and the preheat blankets were left in position and remained on to maintain the minimum preheat temperature. At the end of this QA Inspector's shift the groove weld had only received approximately 1/2 hour of post heating. This information was turned over to QA Inspector Jojo Lizardo on the next shift.

At weld joints 4E/5E LS-4, 5 and 6, inside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) performing SMAW to build up / butter the ends of each stiffener prior to the start of the groove welding. This QA Inspector observed a hand held torch was being used to preheat the base material prior to welding at each location. This QA Inspector observed QC Inspector John Pagliero was present and monitoring the welding. This QA Inspector performed a verification of the following welding parameters: 122 amperes using a 3.2 mm diameter E9018H4R electrode. The welding observed appeared to comply with ABF-WPS-D15-1012-3.

Adjacent to the locations above this QA Inspector observed a welding electrode holding oven, the oven was on and the temperature gauge was greater than 250 °F.

As requested by Lead Inspector Rick Bettencourt the status of welding on 7E/8E welds joints A thru F was verified by this QA Inspector. Below are the results:

A-weld joint: welding completed and QC inspection in progress

B-weld joint: welding completed, no indication of final QC inspections performed according to the weld map adjacent to the weld

C-weld joint: no welding performed on both C1 and C2

D-weld joint: welding performed on the inside of the OBG section, backing bar still in place

E-weld joint: E-1 no welding performed, E-2 welding partially completed (approximately 90%)

F-weld joint: weld on the outside completed and approximately 95% of the weld has been back gouged from the inside

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Materials for your project.

Inspected By: Hager,Craig

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer